



# 1997-98 KIRIS ASSESSMENT

## Open-Response Item Scoring Worksheet

### Grade 4—Reading Question 10

#### Type of Passage: Informational

The **academic expectation** addressed by “When It’s Polite to Spit” (Question 10) is

1.2 Students make sense of the variety of materials they read.

The **core content** assessed by this item includes

- Identify main ideas and details which support them.

#### When It’s Polite to Spit

Pretend you are going to give a speech to the primary students in your school. Using THREE examples from the article, what would you tell them about why animals spit?



# SCORING GUIDE

## Grade 4 Reading

Score	Description
4	Student clearly explains <b>three</b> major reasons why animals spit using examples from the article. Response demonstrates an in-depth understanding of <b>each</b> reason. Response shows that student is aware he/she is making a speech to primary students.
3	Student explains <b>three</b> reasons why animals spit using example(s) from the article. Response demonstrates an understanding of why animals spit. <b>OR</b> Student clearly explains <b>two</b> reasons why animals spit using example(s) from the article. Response demonstrates an understanding of those two reasons. Response may or may not show that student is making a speech.
2	Student identifies <b>two</b> or <b>three</b> examples of some animals spitting but demonstrates limited understanding of why. <b>OR</b> Student identifies <b>one</b> reason why some animals spit demonstrating a literal understanding by using some relevant examples. Response may or may not show that student is making a speech.
1	Response shows a vague or minimal understanding of the article.
0	Response is totally incorrect or irrelevant.
Blank	No response.

### Examples of animals that spit (with reasons):

- **Animals that spit to defend/protect themselves:**
  - Spitting cobras spit venom into an enemy's face by using spray-holes in the front of their fangs.
  - "Walking worms" can defend themselves by squirting grey slime from two bumps near their mouths.
- **Animals that spit to eat:**
  - "Walking worms" spit a slime that flies through the air and falls and quickly hardens over insects.
  - Archerfish spit a high-speed jet of water droplets at bugs on plants. The bugs bounce off the plants, and the fish catch them in their mouths.
- **Animals that spit to find a mate:**
  - The male scorpionfly spits a blob of sticky saliva onto a leaf during mating. The female scorpionfly eats the hardened saliva.



## READING PASSAGE

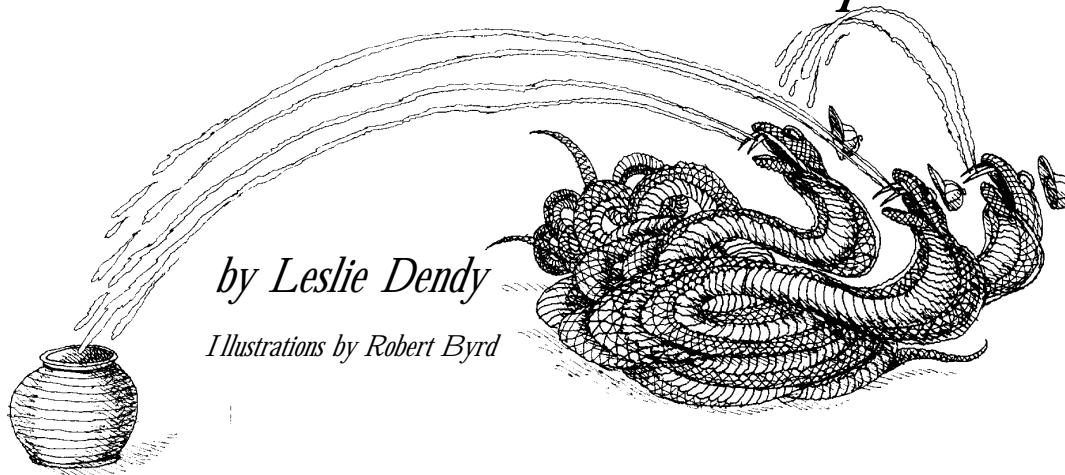
### Grade 4

The science article you are about to read explains how and why some animals spit. Read the article. Then answer the questions.

# *When It's Polite to Spit*

by Leslie Dendy

Illustrations by Robert Byrd



You may have been scolded for spitting, but did you know that some animals spit to defend themselves, to eat, or to find a mate?



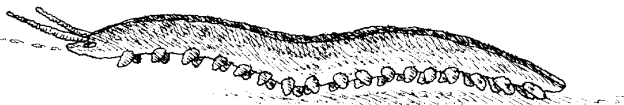
Spitting cobras save their lives by spitting venom. If a person or large animal gets too close, *zap!* The snake spits a stream of venom in the enemy's face, as far as eight feet away. The venom burns the enemy's eyes and may even cause blindness.

Snake venom is a kind of saliva. Most poisonous snakes stab venom into their victims with their fangs. Spitting cobras can do that, too. But they can also spit venom long distances because they have spray-holes in the front of their fangs instead of at the pointed tips.



"Walking worms" can protect themselves and also catch dinner by spitting. Scientists call these velvety worms onychophorans (on-ih-KOFF-er-uns). They crawl around in tropical forests on dozens of stubby little legs. When a walking worm finds an insect to eat, it squirts streams of gluey slime from two bumps near its mouth. The slime flies through the air, falls over the insect like a net, and hardens very fast. Instant prison!

Archerfish spit water. These tropical fish are experts at shooting bugs off plants by spitting out a high-speed jet of water droplets. The fish swim





## READING PASSAGE

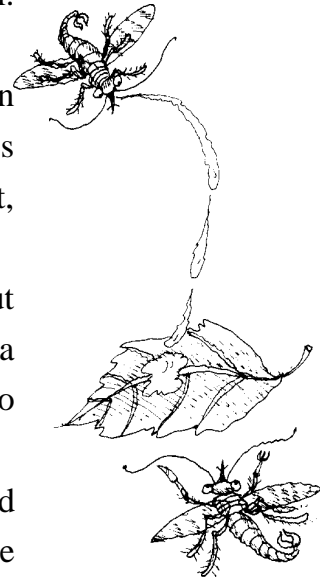
### Grade 4

under the surface of a stream or marsh, searching for insects on the plants along the bank. When an archerfish spots a tasty bug, it turns its mouth into a squirt gun by pressing its tongue against a groove in the roof of its mouth. This makes a tiny tube like a gun barrel. The fish squeezes the water in its throat out through the tube.

A baby archerfish can spit water only two or three inches, but an adult can hit a bug four, five, or even ten feet away. The water drops hit so hard that the bug bounces off the plant in a flying somersault, and the fish catches it in its mouth.

You probably never thought of giving your saliva as a present. But common scorpionflies give each other spit presents. During mating, a male spits a blob of sticky saliva onto a leaf. The saliva hardens into a nutritious snack, and the female scorpionfly eats it.

Everyone in the camel family spits. That means camels, llamas, and three other humpless South American relatives: the shaggy alpaca, the skinny guanaco, and the vicuna. When these animals are upset with one another, they kick, bite, and spit in each other's faces. And they don't just spit saliva. They also spit sour green stomach juices. When they're annoyed, these camels also spit at people. Next time you visit the zoo, watch out!



"When It's Polite to Spit" by Leslie A. Dendy, illustrated by Robert Byrd. Appeared in the August 1992 issue of *Cricket* magazine. Text reprinted by permission of the author. Illustrations reprinted by permission of the illustrator.



# ANNOTATED STUDENT RESPONSE

## Grade 4 Reading

### Sample 4-Point Response of Student Work

Student Response		
Student shows an awareness of speaking to primary students.	<p>Hey, I'm here to tell you why animals spit. Most animals spit to defend, to get a mate, or to eat.</p> <p>Two animals that spit to defend are the spitting cobras. The spitting cobras can spit out venom eight feet long. The venom that the cobras spit out can burn your face. Another animal that spits to defend is the camel. The camel spits out saliva and a sour green stomach juice when they're upset.</p> <p>Two animals that spit to eat are the archerfish and the walking worms. An archerfish spits out a jet of flying water droplets that pushes the bug off the leaf and into the archerfish's mouth. A walking worm spits out this sticky gluey stuff that sticks to the bugs and allows the worm to get over there in time to eat it.</p> <p>An animal that spits to get a mate is the scorpionfly. The way they do this is the male spits his spit onto a leaf. The spit hardens onto the leaf. Then a female comes and eats the spit and they mate. If you ask me, the way they mate is pretty</p>	Student clearly identifies three major reasons why animals spit.
	Student uses appropriate examples from the article to illustrate a first reason (i.e., "to	
	Student uses appropriate examples from the article to illustrate a second reason (i.e., "to eat").	
Student uses appropriate examples from the article to illustrate a third reason (i.e., "to get a mate").	Overall, student demonstrates an ability to identify the main ideas of an article and the details which support them. Student clearly explains three major reasons animals spit and uses appropriate examples from the article to illustrate each reason. Student's response shows a thorough understanding of the question and of the materials read.	



# ANNOTATED STUDENT RESPONSE

## Grade 4 Reading

### Sample 3-Point Response of Student Work

#### Student Response

Student shows an awareness of speaking to primary students.

If I were giving a speech to the primary students I would tell them that sometimes things spit. It is rude to spit, but in the animal kingdom some animals spit.

The cobra spits but it spits because if a bigger animal came up to it, it could defend itself.

Archerfishes spit so they can eat. See if a fly were on a leaf over the top of the water, an archerfish could spit water at the bug so it would fall into the water and the fish could eat it. They will sneak up behind bugs, spit their venom on them and eat them.

So you see animals have reasons to spit, humans don't.

Student identifies one reason why animals spit (i.e., “defend itself”) and provides an example from the article.

Student identifies a second reason why animals spit (i.e., “so they can eat”) and provides an example from the article. Student makes a minor error by referring to the archerfish as having venom.



# ANNOTATED STUDENT RESPONSE

## Grade 4 Reading

### Sample 2-Point Response of Student Work

Student Response		
Student shows an awareness of speaking to primary students.	I would give a speech about spit I would tell: that a spitting cobra could spit up to a distance of 8 feet.	Student describes a detail from the article, but does not link the detail to a reason why animals spit.
Student correctly identifies three reasons why animals spit.	Also, I would try to tell the primary kids that the reason why animals spit, and that is to defend their selves, to eat, or to find a mate.  Last but not least a fish in the tropics which catches flies because of a jet of	Student describes an example from the article, but does not clearly link the example to a reason why animals spit.

### Sample 1-Point Response of Student Work

Student Response	
<ol style="list-style-type: none"><li>1. To protect themselves,</li><li>2. To blind things,</li><li>3. Cobras venom can kill you if it gets in your body.</li></ol>	Student attempts to list three reasons why animals spit, but only the first item is a major reason. The item about the cobra is not an example or detail from the article.



# INSTRUCTIONAL STRATEGIES

## Grade 4 Reading

The open-response item “When It’s Polite to Spit” was designed to assess how well fourth-graders can read and comprehend an informational reading passage. Students who successfully responded to this item showed the ability to both clearly identify the main ideas found in this passage and to accurately identify details from the passage that support those main ideas. The instructional strategies below present ideas for helping students to explore and master these skills.

The 1996-97 KIRIS “Open-Response Scoring Worksheet” presented many instructional strategies and ideas for structuring a classroom reading program that teaches students particular strategies for comprehending informational reading passages. You may want to review these strategies and also consider doing the following:

- Teach and show students the process that a good reader uses to read and comprehend an informational reading passage. Explain to students that good readers connect ideas and information from an informational reading passage with previous knowledge and experience. They examine the text by making judgments, reflecting on the significance of textually-based ideas, and extending these ideas into new contexts. Throughout the reading, they tolerate any ambiguities or uncertainties that may arise (e.g., they do not stop reading because they are uncertain as to the meaning of a piece of information). They are also able to show their comprehension by using the following strategies: paraphrasing, commenting, summarizing, quoting, questioning, making graphics, etc. Teach these strategies both as mental strategies to be used while interacting with and comprehending informational text and as strategies to show their comprehension after reading the text.
- Elicit from students the individual strategies they use to make sense of the main ideas in informational passages and the strategies they use to remember those main ideas. Chart these strategies for class use, and then add to that list throughout the school year as more strategies are introduced or recalled. A focus on bringing these strategies to consciousness helps students develop a sense of metacognition, where students begin to become aware of their own reading processes as well as aware of their own growth in learning how to read and understand information.

Have students work individually, in pairs, or in small groups to complete any or all of the following activities:

- Identify the main ideas in an informational passage (which is provided by the teacher). Share with the class the strategy or strategies used to determine the main ideas. Compare their strategies to those charted (see above) and discuss which of the strategies are the easiest and most effective.
- Connect specific examples (provided by the teacher or by the student from real-life experiences) with main ideas from an informational passage. Discuss the strategy or strategies they used to determine a match between the examples and the main ideas.
- Read a book about a particular animal or group of animals (e.g., one of the books in the series, *Strange Things Animals Do*). Prepare an oral report about their animal(s) that focuses on three main ideas and provide some examples to illustrate those main ideas.